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The Development of Restrictive Disclosure
in Children's Communication with Peers

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Masters thesis submitted to the department
of psychology in partial fulfillment for
the requirements of Master of Arts.

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Abstract

Research supports the conclusion that adults show a pattern of restrictive disclosure in which they choose to disclose intimate information to friends rather than nonfriends. From a developmental perspective, however, only limited evidence exists for this restrictive disclosure to friends process in children. The present study was designed to investigate whether, and if so at what age, children show the restrictive disclosure to friends in their actual communication with peers. Sixteen subjects (8 boys and 8 girls) selected from each of kindergarten, second and fourth grades were asked to "send a message" on a tape recorder to both a peer friend and peer nonfriend and talk about five categories which varied in personal content. The results indicated that the restrictive disclosure to friends pattern was evident in all three grades examined. Subjects disclosed overall, more high intimate but not more low intimate information to friends than to nonfriends. Age differences were also found in which there was an increase with age in the restriction of positive personal information to friends. These findings were discussed in terms of the development of social modesty.

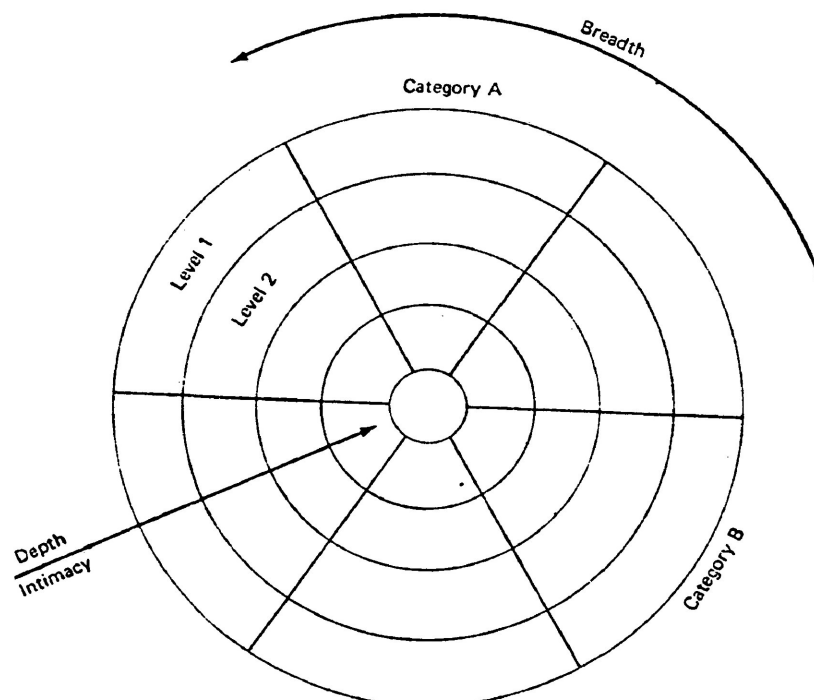
The Development of Restrictive Disclosure in Children's Communication with Peers

Inherent in the research in self-disclosure is the notion that individuals restrict the disclosure of intimate information to significant persons, such as friends, rather than to others, nonfriends. Empirical evidence (e.g. Altman & Taylor, 1973; Jourard, 1971) exists which supports this conclusion in adults. However, researchers have not yet systematically investigated whether children show the restrictive disclosure to friends. Researchers investigating children's friendship (Bierman & Furman, 1984; Berndt, 1981; Selman & Selman, 1979) have found indirect evidence for the restrictive disclosure to friends in older children (8 and/or 10 years and older). More direct research by Rotenberg, Mann and Chase (1985) has yielded evidence for the restrictive disclosure to friends in kindergarten children (6 years). However, there are limitations with these studies and it remains unclear if children show the restrictive disclosure to friends. The present study was designed, using structured methods, to investigate whether, and if so at what age, children show the restrictive disclosure to friends in their actual communication to peers.

Theoretical Framework

The social penetration theory by Altman and Taylor (1973) provides a comprehensive framework to describe the principle of restrictive disclosure to friends and also suggests the mechanism responsible for it. Accordingly, the framework involves a simple conception of personality structure and the systematic organization of the "items" of personality into this structure. Structurally, social penetration theory postulates an "onion-skin" analogue in which personality is depicted as a series of concentric circles (layers) with decreasing diameter towards the core. Furthermore, these concentric circles are also sectioned like an orange which radiate outward from the center (Archer, 1980). This personality structure analogue is graphically depicted in Figure 1.

Figure 1.



As can be seen, there is a broad band at the outer boundaries which contain the low intimate aspects of personality, and a narrow band at the core which contains the high intimate aspects. Depicted in this way, the self is seen as a circular library in which information is shelved according to its centrality and type (Archer & Earle, 1983).

Two dimensions of personality structure serve as critical aspects of restrictive disclosure to friends. First, there is the general dimension of breadth which is subdivided into breadth category and breadth frequency. Breadth category is the major topical area or category at each layer of personality. Within each area is also a number of items or specific characteristics. The number of specific items within each category is the breadth frequency. In terms of restrictive disclosure to friends, there are a number of possible combinations of the breadth dimension. For example, an individual may disclose few aspects of his/her personality (low breadth category) and barely reveal information within that domain (low breadth frequency). At the other extreme is the individual who discloses many facets of his/her personality (high breadth category) and discloses at great length about each facet (high breadth frequency).

The depth dimension reflects the concentric circles or "layers" of personality in which low intimate characteristics (e.g. biographical information) of an individual exists at the outer layer while the more fundamental "core" characteristics

(e.g. feelings, beliefs, emotions) exist at the central layer. Thus, depth of disclosure refers to the intimacy component of disclosure, or in terms of personality structure, permeation of the layers towards the core. With regard to both the breadth and depth dimensions, an individual's self-disclosure to others is conceptualized as wedge form. It may be a revelation of a number of low intimate topics (breadth) or of a limited amount of highly detailed intimate information (depth), depending on the target recipient.

According to social penetration theory individuals do not disclose self-information haphazardly. Rather, individuals actively gauge the quality of the information to the target individual. In this regard, relationship status between discloser and target recipient is seen as playing a crucial role in the restrictive disclosure to friends process. As social relationships progress from stranger to friend, the self-disclosure wedge increases in size, and hence the individuals disclosure to another increases in both depth and breadth. Altman and Taylor (1973) have conceptualized relationships as progressing in a stage-wise fashion with the quality of self-disclosure differing at each stage. For example, during stage 1 (Orientation) and stage 2 (Exploratory Affective) there is a respective "stranger" and "casual acquaintance" relationship. During these stages only low intimate information is exchanged. A "friend" relationship and high intimate disclosures emerge during stage 3 (Affective) and this relationship status and quality of

disclosures is expanded and strengthened during stage 4 (Stable Exchange). Thus, a growing relationship between individuals is seen as a mutual process of inquiry and disclosure in which they share selves (Archer & Earle, 1983).

To describe the mechanism responsible for social penetration Altman and Taylor (1973) employ the notions of interpersonal rewards and costs. More specifically, it is the reward relative to cost ratio which mediates restrictive disclosure to friends. Reward/cost ratios are regarded as the ongoing perceived balance of positive and negative experiences in a social relationship. The greater the reward/cost ratio the more satisfying the relationship to that individual. Occurring concurrently with ongoing reward/cost ratios, forecast ratios are the projections of future or anticipated ratios. Thus, individuals engage in a forecasting of potential rewards and costs and integrate these predictions into a "net balance" (ongoing ratios) of expected rewards relative to costs in interpersonal relationships.

Broadly, the social penetration theory postulates that individuals disclose more low intimate and more high intimate information to friends than to nonfriends. Furthermore, the theory suggests that a different pattern emerges regarding individuals' motivation for disclosure. Accordingly, three principles mediate this motivational process. First, unlike the disclosure of low intimate information, the disclosure of

high intimate information is associated with high rewards and high costs. Second, the disclosure of high intimate information to friends is perceived to have greater reward than cost. That is, based on past interactions friends would have responded favourably to high intimate information and maintained confidentiality. This is not the case with nonfriends. The disclosure of high intimate information to nonfriends is perceived as unfavourable because of a lack of interaction or because disclosure of this information had resulted in greater costs than rewards. Theoretically, such differential behaviour patterns were used by individual's to define who is a "friend". Third, individuals utilize reward/cost experiences in order to forecast whether the disclosure of high intimate information to a given individual would meet with greater reward than cost. Based on previous experience, individuals anticipate greater reward than cost for the disclosure of high intimate information to friends but not for nonfriends and hence, be more willing to disclose it to the former. Such a difference would be minimal in individuals' willingness to disclose low intimate information because it is not associated with high reward and cost either for past or future interactions. It is this complete pattern which is identified as the "restrictive disclosure to friends".

Research in Adults

Research (e.g. Altman & Haythorn, 1965; Morton, 1978; Taylor, Altman & Sorrentino, 1969; and Won-Doornink, 1979) provides direct evidence for the restrictive disclosure to friends in adults. For example, Won-Doornink (1979) investigated the stage of relationship and intimacy of self-disclosure. It was found that during the early stages of a relationship (less than 6 hours of interpersonal interaction) individuals preferred to discuss low intimate and medium-intimate matters. During the middle (interpersonal interaction of more than 3 months but less than 1 year) and advanced (best same-sex friend) stages individuals preferred to discuss high intimate and medium-intimate matters, respectively. These findings provide evidence for greater restriction of high intimate information to friends rather than those not regarded as friends.

Support for the restrictive disclosure to friends in adults has also been derived indirectly via research in adults concepts and expectations of friendship. Investigating adult friendship patterns, Weiss and Lowenthal (1975) found that adults identify the sharing of intimacy as an important aspect of friendship. There is, however, one limitation of this indirect evidence of restrictive disclosure to friends. That is, the findings reflect the adults desired friendship relationships or their general concepts about friendship and do not specifically show that adults engage in the restrictive

disclosure to friends.

Research in Children

There is indirect evidence for restrictive disclosure to friends in children. Similar to adult studies, researchers have investigated children's concepts and expectations of friendship (Berndt, 1982; Bigelow, 1977; Selman & Selman, 1979). In general, children were interviewed about their concepts of friendship or required to write about what they wanted in a friend. This research has found evidence for age increases in children's identification of the exchange of intimate information as important to friendship. Moreover, the findings indicate that the emphasis of intimacy in friendship emerges by 10 years of age in children. This friendship line of research proposes that cognitive maturation mediates the restrictive disclosure to friends process. That is, the restrictive disclosure only emerges once the child has attained a "role taking" ability in which he/she is able to keep their views and another person's views in mind concurrently (Selman & Selman, 1979). There does, however, appear to be some inconsistencies in the friendship research for evidence of when this maturation occurs. For example, Bierman and Furman (1984) employed a hypothetical dilemma and lists of characteristics in studying friendship expectations in children from grades 2, 4, and 6. These researchers found that even second grade children (8 years of age) identified intimacy as important for friendship.

While relevant to self-disclosure in children, the friendship line of research does have its limitations. First, the findings were highly dependent on the children's ability to verbalize. Second, the children were asked about hypothetical friendships or hypothetical situations. Third, as with the adult friendship research, the findings reflect the children's desired friendship patterns or their general concepts of friendship. Whether children themselves show the restrictive disclosure to those they regard as friends was not directly assessed and remains unknown.

Only very limited research exists that has directly investigated the issue of restrictive disclosure to friends in children. Rivenbark (1971) required children/adolescents from grades 4, 6, 8, 10, and 12, to report the intimacy of their self-disclosures to target individuals (mother, father, male and female peer age friends). It was found that the reported intimacy of self-disclosure was; a) higher in girls than in boys; b) higher in older than in younger children when the target was peers; c) greater to mothers than to other targets; and d) greater to same sex peers than to opposite sex peers.

Gottman (1983) has investigated children's self-disclosure in the context of friendship formation. Children who ranged in age from 3 to 9 years were assessed on the achievement of friendship in dyadic interactions. It was found that the achievement of friendship (hitting it off) was

positively correlated with the exchange of self-disclosure (expression of feelings and questions about feelings) but only in later social interactions.

In a more recent study, Rotenberg ,Mann and Chase (1985) directly investigated restrictive disclosure to friends in children. Children in kindergarten, second and fourth grades were presented a series of social statements that were grouped into 5 categories according to level of intimacy. The 5 categories were: 1) positive personal, (high intimate information of positive valence); 2) negative personal (high intimate information of negative valence); 3) personal preference (likes and dislikes, as well as preferred group membership); 4) descriptions of people and activities (nonevaluative descriptions of people and activities); and 5) description of the environment (nonevaluative description of the environment). Subjects were asked, "if they said the statement who would they say it to?", and to indicate on a 3-point scale. The scale was comprised of; 1) a couple of good friends, 2) a couple of good friends and others, and 3) anyone and served as the restrictive disclosure to friends judgement, i.e. the lower the score the greater the restriction. Overall, it was found that children in all three grades demonstrated the restrictive disclosure to friends. Specifically, kindergarten children restricted negative personal information; second grade children restricted negative personal as well as personal preference; and fourth grade children restricted negative personal, positive

personal, and personal preference information. Furthermore, there were age differences in the disclosure of positive personal information in which there was an increase with age in the restriction of this information.

From the Rotenberg, Mann and Chase (1985) investigation there is direct evidence for the restrictive disclosure to friends in children. However, this study is limited in that; a) the findings reflect the children's disclosure of social statements provided by the experimenter, b) they reflect the child's intentions to disclose information, and c) they reflect disclosures to hypothetical individuals. What needs to be assessed is the children's disclosure of; a) information which they select to disclose, b) their actual behaviour of disclosing, and c) disclosing to actual peers.

Criteria for Restrictive Disclosure

It is important to specify the criteria necessary for the restrictive disclosure to friends to be shown. There are two important conditions for this to be shown in children. First, the restrictive disclosure to friends represents the interaction of two differentiations; target and content. That is, individuals must differentiate between both the target of disclosure, i.e. friends vs nonfriends, and the content of disclosure, i.e. high intimate vs low intimate information. The restrictive disclosure to friends would be shown by the disclosure of more high intimate information, but not more low

intimate information, to friends than to nonfriends. The second condition is that the restrictive disclosure to friends is a motivational orientation. That is, individuals must show a willingness to reveal as yet undisclosed information in a new social interaction.

The Hypotheses Guiding the Present Study

From the available evidence there appears to be some inconsistencies regarding whether, and if so at what age, children would show the restrictive disclosure to friends in their own communication to peers. From the friendship research it is expected that the restrictive disclosure to friends would be evident by fourth grade (10 years of age) or perhaps second grade (8 years of age). Based on the findings of Rotenberg, Mann and Chase (1985) it is expected that children as young as kindergarten (6 years of age) and older would demonstrate the restrictive disclosure to friends.

Method

Subjects

Subjects were 16 children (8 girls and 8 boys) from each of kindergarten, second and fourth grades. The mean age for the different grades were 5-7, 7-7, and 9-5, years and months respectively. Subjects were obtained from three elementary public schools in Thunder Bay, Ontario. Participation was

voluntary and contingent upon parental permission. (See Appendix A.).

Stimulus and Apparatus

Five discussion categories varying in level of intimacy and previously employed by Rotenberg, Mann and Chase (1985) were employed in the present study. Category 1 (Descriptive: Environment) pertains to the general surroundings of the child, i.e. where they live and what their house looks like. Category 2 (Descriptive: People and Activities) pertains to familiar individuals and/or enterprises of the child, e.g. number of siblings they have or how they get to school. Category 3 (Personal Preferences) pertains to items the child likes or dislikes, e.g. food, games, subjects at school etc. Category 4 (Positive Personal) pertains to aspects which the child feels are "good" about him/herself. Category 5 (Negative Personal) pertains to aspects which the child feels are "bad" about him/herself. Two cassette tape recorders (General Electric model No. 3-5145B) were used to record subject's responses.

Procedure

Subjects were tested individually. Subjects were first required to identify a peer (boy/girl) in their class who they considered to be a "good friend", and also a peer they considered to be "not a good friend". The identified peer names were recorded on separate index cards and each placed in front of a separate tape recorder. Thus, one tape recorder was labelled as "friend" tape recorder (by name) and the other tape recorder was labelled as the "nonfriend" tape recorder (by name). Subjects were then explained how to operate each tape recorder and given a demonstration of its use. Subjects were required to have a "trial run" tape by sending a message to the experimenter to ensure familiarity with proper use of the tape recorders. Subjects were instructed to "send a message on the tape recorder" first to one identified peer and then to the other peer. The order of disclosure to friend/nonfriend was counterbalanced across subjects. Subjects were instructed to talk as much or as little about each of the five categories. Subjects were prompted once when each of the five categories was introduced. The specific instructions given for each category are presented in Appendix B. If the subject did not respond to the prompt the procedure continued to the next category. Subjects were encouraged to convey "new" information, "things they have not already talked about". Subjects were informed that each identified individual would hear their respective tape "at a later

date". Subjects were assured confidentiality, i.e. only identified individual, experimenter, and subject would be aware of the contents of the tape. The entire procedure took approximately 30 minutes.

To check on the validity of the subjects selection of friends and nonfriends, the class teacher was first asked to pair students according to which pairs "spends most time together" and, second, according to "best friends". This procedure was intended to serve as a confirmation of relationship status (friend/nonfriend) of the target recipients.

Results

One expectation of the present investigation was that teachers observationally based selection of child peers who "spend the most time together" and "best friends" would be in agreement with the children's friendship identifications (friends/nonfriends). As expected, teacher identification of friends was in agreement with the children's identification of friends 88%, 75%, and 94%, for kindergarten, second, and fourth grades, respectively, for the "spends most time" selection. Teacher identification of friends were in agreement with the children's identification of friends 88%, 88%, and 100% for the kindergarten, second and fourth grades, respectively, for the "best friend" selection. The agreement selections were all statistically significant by sign tests (all $ps < .01$).

Employing a procedure similar to that of Gottman (1983), each subjects tape recorded messages were transcribed verbatim and categorized according to the number of utterances per category topic. A single utterance was defined as any speech separated by pauses. The number of utterances comprised the disclosure per subject score and was subjected to a 3(grade) X 2(sex) X 5(category topic) X 2(target individual) analysis of variance with repeated measures on the latter two variables. From the initial analysis Bartlett's tests for the homogeneity of variance indicated that there was considerable heterogeneity of variance in the raw data. Overall, the

analysis yielded or approached significance for 7 of the 10 target by category cells ($F(2,2268) = 1.82$ to 5.64). Kirk (1964) has suggested that a log transformation ($\log_{10} + 1$) procedure may be used to increase the homogeneity of variance. This procedure was employed on the raw data and was successful at increasing the homogeneity of variance such that none of Bartlett's tests yielded significance. For the present purposes both the analysis of the raw and transformed data will be reported (These analyses are presented in analysis tables appendix).

The analysis of both raw data and transformed data yielded a main effect of grade ($F(2,42) = 3.69$, $p < .05$ (raw); $F(2,42) = 4.68$, $p < .05$ (transformed)) in which there was an increase with age in the number of disclosures. The mean number of disclosures for the kindergarten, second and fourth grade subjects were 1.82, 3.43, and 3.58 of the raw data, respectively; and .283, .472, and .508 of the transformed data, respectively. In addition, the analysis of the raw data yielded a unique sex by grade interaction ($F(2,42) = 3.26$, $p < .05$). A posteriori (Tukey) comparisons indicated that males disclosed more than females in second grade while the opposite difference was evident in fourth grade. The means for this analysis are presented in Table 1.

Both analysis yielded a main effect of category, ($F(4,168) = 32.29$, $p < .001$ (raw), $F(4,168) = 56.19$, $p < .001$ (transformed)) that was qualified by the expected interaction

Table 1
Mean Number of Disclosures for the
Grade by Sex Interaction

| Grade | Sex | |
|-------|------|--------|
| | Male | Female |
| Kd | 1.82 | 1.93 |
| 2nd | 4.23 | 2.64 |
| 4th | 2.54 | 4.63 |

of category and target ($F(4,168) = 18.45$, $p < .001$ (raw) and $F(4,168) = 25.09$, $p < .001$ (transformed)). These were partially qualified by a three-way interaction of grade, category and target in the analysis of the transformed data which approached significance ($F(4,168) = 1.78$, $p < .10$). The means for these analyses are presented in Table 2.

To assess the observed interactions a $3(\text{grade}) \times 2(\text{sex}) \times 2(\text{target individual})$ analysis of variance (ANOVA) with repeated measures on the last variable was performed on each of the categories. The mean error in the raw data was more representative of the error variance of each category and therefore only the raw data was subjected to the separate analysis. A posteriori (Tukey) comparisons were used to assess the differences at each grade with the level of significance established at .05. For the description of the environment category, the analysis did not yield significance with the notable absence of the target effect ($F(1,42) = .11$, $p < .10$). The description of people and activities category analysis yielded a main effect of grade $F(2,42) = 4.21$, $p < .05$ that was qualified by a grade \times sex interaction $F(2,42) = 5.81$, $p < .05$. The means are shown in Table 3. These findings were the result of greater disclosure by females than by males in second grade, however the reverse was true for fourth grade. The effect of target in this category was non-significant. The analysis of the positive personal category yielded a main effect of target ($F(1,42) = 5.21$, $p < .05$) that was partially qualified by the expected grade \times target interaction ($F(2,42) =$

Table 2.

Raw and Transformed Means of the Number of Disclosures
for the Grade by Target by Category Interaction

| Grade | Target | Category | | | | |
|-------------------|-----------|-------------------|-------------------|----------------------|------------------------------------|--------------------------------|
| | | Positive Personal | Negative Personal | Personal Preferences | Description of People & Activities | Description of the Environment |
| Raw Means | | | | | | |
| Kd | Friend | 1.19 | .44 | 4.38 | 2.81 | 1.44 |
| | Nonfriend | .69 | .13 | 3.13 | 2.88 | 1.12 |
| 2nd | Friend | 1.31 | 1.56 | 8.50 | 7.19 | 1.31 |
| | Nonfriend | 1.44 | 1.00 | 5.31 | 5.38 | 1.31 |
| 4th | Friend | 1.63 | .94 | 8.19 | 7.56 | 1.81 |
| | Nonfriend | .56 | .44 | 6.63 | 6.25 | 1.81 |
| Transformed Means | | | | | | |
| Kd | Friend | 2.60 | 1.16 | 6.24 | 3.80 | 2.68 |
| | Nonfriend | 1.57 | .38 | 4.46 | 4.46 | 2.51 |
| 2nd | Friend | 3.21 | 3.21 | 8.44 | 7.84 | 2.96 |
| | Nonfriend | 3.27 | 2.54 | 6.35 | 6.42 | 3.00 |
| 4th | Friend | 3.21 | 2.29 | 8.66 | 7.79 | 2.59 |
| | Nonfriend | 1.54 | 1.24 | 7.37 | 7.45 | 3.12 |

Table 3.

Mean Number of Disclosures of the Description of the People
and Activities Category for the Grade X Sex Interaction

| Grade | Sex | |
|-------|------|--------|
| | Male | Female |
| Kd | 2.94 | 3.00 |
| 2nd | 9.44 | 3.13 |
| 4th | 5.00 | 8.81 |

2.67, $p < .10$). These results indicated that only fourth grade subjects disclosed more positive personal information to friends than to nonfriends. Furthermore, there was a decrease in the disclosure of positive personal information from second to fourth grades to nonfriends. The means for this interaction are shown in Table 2. For the negative personal category the analysis yielded a main effect for grade ($F(2,42) = 6.08$, $p < .05$) in which there was an increase with age in the disclosure of negative personal information. This analysis also yielded a main effect of target ($F(1,42) = 7.21$, $p < .05$) in which subjects disclosed more negative personal information to friends than to nonfriends which was significant for second and fourth grade subjects.

One of the issues addressed by the present investigation was at what age children would demonstrate the restrictive disclosure to friends. It was found that the kindergarten subject's disclosure of personal preference, positive personal, and negative personal information to friends and nonfriends were found to be not significant. However, the findings were obscured by the relatively low frequency of the disclosures of each of these categories in kindergarten subjects. To assess more directly the restrictive disclosure to friends of personal information, the personal preferences, positive personal, and negative personal information categories were collapsed into a "personal information" category and subjected to $3(\text{category}) \times 2(\text{target individual})$ analysis of variance (ANOVA). T-test comparisons from this

analysis yielded an effect of target in kindergarten subjects ($t(42) = 2.75, p < .01$). An effect of target was also found in both second grade ($t(42) = 4.83, p < .001$) subjects and fourth grade ($t(42) = 4.17, p < .001$) subjects. In each of the grades subjects disclosed more high intimate information to friends than to nonfriends.

The present study dealt with what the subjects themselves regarded as "personal" information. Since the utterances per category were based on each subject's interpretation of the type of information each category represents, it is valuable to know whether children's interpretation of the category would parallel those of an unbiased observer. Agreement between the two would be evidence for validity of the data. To this end, two independent raters, naive to the purpose of the study, randomly coded 25% of the subjects disclosures according to the five categories. Interrater reliabilities (agreement/total) were 84%, 83%, 95%, 86%, and 91% for the positive personal, negative personal, personal preference, description of people and activities, and description of the environment categories, respectively. The overall interrater reliability was 84%. Each rater coded one half of the subjects protocols. Agreement between the raters classification of the disclosures and the subjects disclosures for the five categories was 91%, 78%, 91%, 52%, and 88%, respectively. The overall agreement was 75%.

Discussion

One expectation of the present investigation was that classroom teachers could confirm the subject's friendship identification. It was found that there was considerable agreement between children's friendship identification and the teachers' observational judgments of those identifications. Thus, there is evidence for the validity of the children's friendship identification.

The primary purpose of the present study was to determine at what age children would demonstrate restrictive disclosure to friends. Overall, the findings indicated that children at all three grades examined demonstrated the pattern of restricting the disclosure of high intimate information to friends rather than nonfriends. As expected, children demonstrated the interaction between target and content differentiation in the disclosure of their own information to peer friends and peer nonfriends. The children disclosed more high intimate information (personal preferences, positive personal and negative personal) but not more low intimate information (description of the environment and description of people and activities) to peer friends than to peer nonfriends.

Previous research in children's friendship patterns (Bierman & Furman, 1984; Berndt, 1981; Selman & Selman, 1979) has found the restrictive disclosure to friends is only

evident in relatively older children (10 years of age) or perhaps as young as 8 years. Alternatively, the research of Rotenberg, Mann and Chase (1985) suggests that the restrictive disclosure to friends emerges in children of kindergarten age (6 years). The findings of the present study are consistent with the Rotenberg, Mann and Chase (1985) findings, and inconsistent with the friendship research. In the present study the restrictive disclosure to friends was evident in children at the youngest age investigated, kindergarten (6 years old). The inconsistency of findings between the present study and the friendship research may be attributed to methodological considerations. That is, the present study was specifically designed and structured to address the issue of restrictive disclosure to friends in children. The friendship research was more an indirect attempt to address that issue.

The findings of the present study also partially confirmed the expected age differences in the children's disclosure of positive personal information. There was a decrease in the disclosure of this information to nonfriends from second to fourth grade, and only the fourth grade children showed the greater disclosure of positive personal information to friends than to nonfriends. As suggested by Rotenberg, Mann and Chase (1985) the developmental difference in the disclosure of positive personal information may be interpreted as the acquisition of social modesty. That is, with increasing age children learn that it is unacceptable to disclose, to nonfriends at least, positive personal

information because it may be regarded as "bragging".

One unexpected finding of the present study was a sex difference. Females disclosed more than males for both kindergarten and fourth grade. However, in second grade males disclosed more than females. This finding is somewhat inconsistent with that of Rivenbark (1971) who found that girls disclosed more than boys at all grades. This finding warrants further investigation.

One aspect of the present study should be emphasized. The children demonstrated, in a laboratory setting, a greater willingness to disclose high intimate information to friends than nonfriends while they showed no difference for low intimate information. Future research should examine the generalizability of this restrictive disclosure to friends in a naturalistic setting.

According to social penetration theory, forecasting is the critical aspect inherent in restrictive disclosure to friends. Individuals maintain expectations regarding the perceived rewards and costs of disclosing information varying in intimacy level to friends and nonfriends. In the present study, children in all three grades examined demonstrated the restriction of disclosure to friends. Presumably, they engaged in the forecasting process and maintained reward and cost expectations regarding their disclosures. Moreover, children in all three grades should maintain the expectations that the disclosure of high intimate information would be

perceived a having higher rewards than costs to friends, but this is not the case with nonfriends. Also, consistent with the Rotenberg, Mann and Chase (1985) interpretation of the acquisition of social modesty, children should, theoretically, acquire with age these expectations for the disclosure of positive personal information.

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Appendix A



Lakehead University

THUNDER BAY, ONTARIO, CANADA, POSTAL CODE P7B 5E1

DEPARTMENT OF PSYCHOLOGY

Dear Parent:

I would like to request your permission to have your child participate in a study that I am conducting. The purpose of the study is to assess what children say, to peers who are their friends and to peers who are not their friends. In the study, the children will be asked to "make a tape" to a boy or girl they consider to be a friend and to a boy or girl they consider not to be a friend. The children will be asked to talk as much as they like about a number of topics to those individuals. Afterwards, if the children were identified as a friend or not a friend, they will be hearing the tapes made to them. In addition, the teachers will be asked to pair the children in the study according to best friends, as another way to assessing friendships.

The study will take approximately 1 hour and it will be conducted in class in the school by my assistant Dave Sliz. It should be emphasized that the present study is concerned with the general way that children of different ages view social communication and it is not concerned with any given child. In effect, the responses of any given child will be kept completely confidential and the findings will be considered and reported solely in terms of the responses of the groups of children at different ages. Please fill out the attached form, indicating whether or not you are willing to let your child participate in the study, and return it to your child's school. Should you have any questions about the study, I would be pleased to answer them. I can be reached at 345-2121, ext. 694.

Yours sincerely,

Ken J. Rotenberg
Assistant Professor

KJR/ml
Encl.

Name of child: _____

Birth date of child: _____

Sex of the child: Male Female (Circle the appropriate
one)

I want my child to participate/not to participate (circle your choice) in
the study conducted by Dr. Ken Rotenberg.

Signed: _____
Signature of Parent or Guardian

Please return this form to school.

Appendix B

Instructions to subjects

For the Description of the Environment category:

I want you to talk to (target) about things such as where you live or what your house looks like, whether you have any pets, things like that.

I want you to talk to (target) about things you have not already told (target) or things you think they don't already know.

For the Description of People and Activities category:

I want you to talk to (target) about something different. I want you to talk to (target) about things such as how you get to school, if you have any brothers or sisters, or what you look like.

I want you to talk to (target) about things you have not already talked about and things you think he/she does not already know.

For the Personal Preference category:

I want you to talk to (target) about something different. I want you to talk to (target) about things you like or don't like. Things such as the foods you like or don't like, the games you like or don't like, or things you like or don't like to do in school. I want you to talk to (target) about things you have not already talked about or

things you think she/he does not already know.

For the Positive Personal category:

I want you to talk to (target) about something different. I want you to talk to (target) about things you think are good about yourself. Things such as your good behaviour, some of your good feelings like when you are really happy or sad, and things you feel are good about your looks. I want you to talk to (target) about things you have not already talked about or things you think she/he does not already know.

For the Negative Personal category:

I want you to talk to (target) about something different. I want you to talk to (target) about things you think are bad about yourself. Things such as your bad behaviour like when you get into trouble, some of your bad feelings when you are mad, and things you think are bad about your looks. I want you to talk to (target) about things you have not already talked about or things you think she/he does not already know.

Analysis Tables

Anova of the Raw data
3(grade) X 5(category) X 2(sex) X 2(target)

| Source | df | SS | MS | F |
|------------------------------|-----|---------|--------|---------|
| Between Subjects | 47 | 2320.98 | 336.00 | |
| Grade | 2 | 305.55 | 152.76 | 3.69* |
| Sex | 1 | 6.77 | 6.77 | .16 |
| Grade by Sex | 2 | 270.15 | 135.08 | 3.26* |
| Subjects within group | 42 | 1735.51 | 41.39 | |
| Within Subjects | 432 | 7292.51 | 780.22 | |
| Target (Targ) | 1 | 5.42 | 5.42 | 1.45 |
| Grade and Target | 2 | 4.85 | 2.43 | .65 |
| Sex and Target | 1 | 8.80 | 8.80 | 2.36 |
| Grade by Sex and Target | 2 | 8.47 | 4.23 | 1.13 |
| Target by within subjects | 42 | 156.96 | 3.74 | |
| Category (Cat) | 4 | 1829.58 | 457.39 | 32.29** |
| Sex and Category | 4 | 17.20 | 4.30 | .33 |
| Grade and Category | 8 | 214.39 | 26.80 | 2.07* |
| Grade by Sex and Category | 8 | 169.29 | 21.16 | 1.63 |
| Category by within subjects | 168 | 1693.10 | 10.08 | |
| Category by Target | 4 | 743.55 | 185.89 | 18.44** |
| Grade and Category by Target | 8 | 96.84 | 12.10 | 1.20 |
| Sex and Category by Target | 4 | 32.79 | 8.20 | .81 |
| Grade by Sex and Cat by Targ | 8 | 133.72 | 16.72 | 1.66 |
| Category by within subjects | 168 | 2177.55 | 12.96 | |

** p<.001

* p<.05

Anova of the Transformed data
3(grade) X 5(category) X 2(sex) X 2(target)

| Source | df | SS | MS | F |
|------------------------------|-----|-------|------|---------|
| Between Subjects | 47 | 20.00 | 3.10 | |
| Grade | 2 | 2.87 | 1.43 | 4.08* |
| Sex | 1 | .26 | .26 | .74 |
| Grade by Sex | 2 | 2.13 | 1.06 | 3.03 |
| Subjects within group | 42 | 14.74 | .35 | |
| Within Subjects | 432 | 50.09 | 6.47 | |
| Target (Targ) | 1 | .07 | .07 | 2.00 |
| Grade and Target | 2 | .05 | .03 | .76 |
| Sex and Target | 1 | .05 | .05 | 1.31 |
| Grade by Sex and Target | 2 | .08 | .04 | 1.07 |
| Target by within subjects | 42 | 1.51 | .04 | |
| Category (Cat) | 4 | 15.12 | 3.78 | 56.19** |
| Sex and Category | 4 | .21 | .05 | .78 |
| Grade and Category | 8 | .90 | .11 | 1.67 |
| Grade by Sex and Category | 8 | .33 | .04 | .62 |
| Category by within subjects | 168 | 11.30 | .07 | |
| Category by Target | 4 | 7.14 | 1.78 | 25.09** |
| Grade and Category by Target | 8 | 1.01 | .13 | 1.78 |
| Sex and Category by Target | 4 | .48 | .12 | 1.68 |
| Grade by Sex and Cat by Targ | 8 | .70 | .09 | 1.23 |
| Category by within subjects | 168 | 11.95 | .07 | |

** p<.001

* p<.05

Anova for the Description of the Environment category
3(grade) X 3(category) X 2(target)

| Source | df | SS | MS | F |
|---------------------------|----|--------|-------|------|
| Between Subjects | 47 | 391.41 | 41.45 | |
| Grade | 2 | 5.69 | 2.84 | .36 |
| Sex | 1 | 10.01 | 10.01 | 1.26 |
| Grade by Sex | 2 | 41.27 | 20.64 | 2.59 |
| Subjects within groups | 42 | 334.44 | 7.96 | |
| Within subjects | 48 | 100.50 | 3.52 | |
| Target | 1 | .26 | .26 | .11 |
| Grade and Target | 2 | .52 | .26 | .11 |
| Sex and Target | 1 | .26 | .26 | .11 |
| Grade by Sex and Target | 2 | .77 | .39 | .16 |
| Target by within subjects | 42 | 98.69 | 2.35 | |

Anova for the Description of People and Activities category
3(grade) X 3(category) X 2(target)

| Source | df | SS | MS | F |
|-------------------------|----|---------|--------|-------|
| Between Subjects | 47 | 2271.15 | 413.84 | |
| Grade | 2 | 306.25 | 153.13 | 4.21* |
| Sex | 1 | 12.76 | 12.76 | .35 |
| Grade by Sex | 2 | 423.08 | 211.54 | 5.81* |
| Subjects within group | 42 | 1529.06 | 36.41 | |
| Within Subjects | 48 | 634.49 | 77.17 | |
| Target | 1 | 25.01 | 25.01 | 1.91 |
| Grade and Target | 2 | 15.08 | 7.54 | .58 |
| Sex and Target | 1 | 17.51 | 17.51 | 1.34 |
| Grade by Sex and Target | 2 | 28.08 | 14.04 | 1.07 |
| Target by within group | 42 | 548.81 | 13.07 | |

* $p < .05$

Anova for the Personal Preference category
3(grade) X 3(category) X 2(target)

| Source | df | SS | MS | F |
|-------------------------|----|---------|--------|---------|
| Between Subjects | 47 | 3089.96 | 245.12 | |
| Grade | 2 | 251.52 | 125.76 | 1.92 |
| Sex | 1 | 15.04 | 15.04 | .23 |
| Grade by Sex | 2 | 77.90 | 38.95 | .59 |
| Subjects within group | 42 | 2745.50 | 65.37 | |
| Within Subjects | 48 | 398.00 | 117.66 | |
| Target | 1 | 96.00 | 96.00 | 14.61** |
| Grade and Target | 2 | 17.31 | 8.66 | 1.32 |
| Sex and Target | 1 | 4.17 | 4.17 | .63 |
| Grade by Sex and Target | 2 | 4.52 | 2.26 | .34 |
| Target by within group | 42 | 276.00 | 6.57 | |

** $p < .001$

Anova for the Positive Personal category
3(grade) X 3(category) X 2(target)

| Source | df | SS | MS | F |
|-------------------------|----|--------|-------|-------|
| Between Subjects | 47 | 114.75 | 10.17 | |
| Grade | 2 | 3.15 | 1.57 | .64 |
| Sex | 1 | 4.60 | 4.60 | 1.86 |
| Grade by Sex | 2 | 3.06 | 1.53 | .62 |
| Subjects within group | 42 | 103.94 | 2.47 | |
| Within Subjects | 48 | 56.51 | 10.10 | |
| Target | 1 | 5.51 | 5.51 | 5.21* |
| Grade and Target | 2 | 5.65 | 2.82 | 2.67 |
| Sex and Target | 1 | .51 | .51 | .48 |
| Grade by Sex and Target | 2 | .40 | .20 | .19 |
| Target by within group | 42 | 44.44 | 1.06 | |

* $p < .05$

Anova for the Negative Personal category
3(grade) X 3(category) X 2(target)

| Source | df | SS | MS | F |
|---------------------------|----|-------|-------|-------|
| Between Subjects | 47 | 74.01 | 10.41 | |
| Grade | 2 | 16.19 | 8.09 | 6.08* |
| Sex | 1 | .04 | .04 | .03 |
| Grade by Sex | 2 | 1.90 | .95 | .71 |
| Subjects within group | 42 | 55.88 | 1.33 | |
| Within Subjects | 48 | 36.01 | 6.87 | |
| Target | 1 | 5.04 | 5.04 | 7.21* |
| Grade and Target | 2 | .27 | .14 | .19 |
| Sex and Target | 1 | .67 | .67 | .95 |
| Grade by Sex and Target | 2 | .65 | .32 | .46 |
| Target by within subjects | 42 | 29.38 | .70 | |

* $p < .05$.